1. A method for estimating an image illuminant, the method comprising:

calculating color gamut models for a plurality of candidate illuminants;

calculating an image color gamut;

determining a distance match metric for each of said candidate illuminants with reference to said image color gamut; and

selecting an image illuminant from said plurality of candidate illuminants based on said distance match metric.

2. A method for estimating an image illuminant, the method comprising:

calculating color gamuts for a plurality of candidate illuminants;

calculating a self-luminosity feature comprising a feature indicating the degree to which image elements are similar to self-luminous image elements or reflective image elements;

separating likely self-luminous image elements from likely reflective image elements;

calculating an image color gamut wherein said reflective image elements are considered differently than said self-luminous image elements;

determining a match metric for each of said candidate illuminants; and

selecting an image illuminant from said plurality of candidate illuminants based on said match metric.

3. A method as described in claim 2 wherein calculating a self-luminosity feature comprises a binary value indicating that an element is reflective or self-luminous.

4. A method as described in claim 1 wherein said gamuts for a plurality of candidate illuminants are histograms of color values for a set of color chips as rendered under each candidate illuminant.

5. A method as described in claim 2 wherein said separating self-luminous image elements comprises determining the proximity of an image element to image boundaries

6. A method as described in claim 2 wherein said separating self-luminous image elements comprises comparing the color characteristics of an image element to the color characteristics of reflective surfaces under a known illuminant.

7. A method as described in claim 2 wherein said separating self-luminous image elements comprises comparing the luminance characteristics of an image element to those of known self-luminous objects.

8. A method as described in claim 2 wherein said calculating an image chromaticity gamut is based solely on said reflective image elements.

9. A method as described in claim 2 wherein said calculating an image chromaticity gamut is based on a weighted distribution of said reflective image elements and said self-luminous image elements wherein said reflective image elements have a greater influence on said gamut.

10. A method as described in claim 1 wherein said determining a match metric comprises calculating a chi-squared statistic related to the variance of the image relative to a candidate illuminant.

11. A method for estimating an image illuminant, the method comprising:

calculating color gamuts for a plurality of candidate illuminants;

identifying image elements according to their likelihood of being self-luminous;

calculating an image color gamut from said image elements wherein said image elements that are more likely to be self-luminous have a lower weight than image elements that are more likely to be reflective elements;

determining a match metric for matching a color gamut histogram for each of said candidate illuminants to a color gamut histogram for said image elements; and

selecting an image illuminant from said plurality of candidate illuminants based on said match metric.

12. A method for estimating an image illuminant, the method comprising:

selecting a set of known illuminants;

establishing a color gamut for each of said known illuminants wherein said gamuts are represented by sample distribution histograms of color values for a set of color chips as rendered under each of said known illuminants;

estimating a weight value related to the probability that an image element in an image corresponds to a reflective surface;

establishing a color gamut histogram for said image wherein said weight value is used to increment the accumulator of a corresponding histogram bin;

computing a match metric between said image color gamut histogram and at least one said known illuminant histograms; and

selecting an estimated image illuminant from among said set of known illuminants wherein said estimated image illuminant has the closest match to the image color gamut histogram.

13. A method as described in claim 12 wherein said estimating a weight value comprises using a function comprising element color values and two image position values.

14. A method as described in claim 12 wherein said computing a match metric comprises using a chi-squared statistic measuring the normalized squared difference between said image chromaticity histogram and said known illuminant chromaticity gamut histograms.

15. A system for estimating an image illuminant, the system comprising:

a first calculator for calculating color gamuts for a plurality of candidate illuminants;

a second calculator for calculating the degree to which an element is self-luminous vs. reflective;

a third calculator for calculating an image color gamut wherein said reflective image elements are considered differently than said self-luminous image elements;

a matcher for determining a match metric for each of said candidate illuminants; and

a selector for selecting an image illuminant from said plurality of candidate illuminants based on said match metric.

16. A set of executable instructions for estimating an illuminant of an image, said instructions comprising the acts of:

calculating color gamuts for a plurality of candidate illuminants;

calculating a self-luminosity feature that estimates the degree to which an element is self-luminous vs. reflective;

calculating an image color gamut wherein said reflective image elements are considered differently than said self-luminous image elements;

determining a match metric for each of said candidate illuminants; and

selecting an image illuminant from said plurality of candidate illuminants based on said match metric.